

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference LOMASR.021QP	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, Item 5 below.	
International application No. PCT/US2005/029027	International filing date (day/month/year) 16/08/2005	(Earliest) Priority Date (day/month/year) 16/08/2004
Applicant LOMA LINDA UNIVERSITY MEDICAL CENTER		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the International search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. 21D
- ☒ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

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International application No.

PCT/US2005/029027

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

ABSTRACT

An apparatus (50) processes a surface of an inhabitable structure. The apparatus includes a laser base unit (300) which irradiates an interaction region with laser light, the laser light removing material from the structure. The laser base unit includes a laser generator (310) and a laser head (200, 1200) coupled to the laser generator (310). The laser head (200, 1200) includes a containment plenum (240) which confines and removes material from the interaction region. The containment plenum (240) includes a rubber seal (246) which contacts the structure and which substantially surrounds the interaction region, thereby facilitating confinement and removal of material from the interaction region, and providing reduced disruption to activities within the structure. The apparatus further includes an anchoring mechanism (110, 1110) releasably coupled to the structure and releasably coupled to the laser head (200, 1200). The apparatus further includes a controller (500) electrically coupled to the laser base unit. The controller transmits control signals to the laser base unit (300) in response to user input.

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International application No

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A. CLASSIFICATION OF SUBJECT MATTER

B23K26/10 B23K26/12

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B23K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 977 515 A (URAKI ET AL) 2 November 1999 (1999-11-02)	1,5,7,8, 10-12, 15-19
A	the whole document	2
A	US 5 592 283 A (FLESHER ET AL) 7 January 1997 (1997-01-07) the whole document	3,6,13, 14
A	EP 1 189 241 A (KABUSHIKI KAISHA TOSHIBA) 20 March 2002 (2002-03-20) the whole document	1-3,7,8, 10,11, 15-19

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 January 2006

Date of mailing of the international search report

06/02/2006

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2005/029027

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5977515	A	02-11-1999	JP 3119090 B2 JP 8103882 A	18-12-2000 23-04-1996
US 5592283	A	07-01-1997	NONE	
EP 1189241	A	20-03-2002	WO 0173793 A1 US 2002134764 A1	04-10-2001 26-09-2002